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ABSTRACT

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Benefits from welfare programs typically decline with income, i.e., there is an implicit tax. These tax rates can be as high as 100 percent. Eligibility for multiple programs opens up the possibility of combined marginal tax rates exceeding 100 percent.

In this paper, the combined marginal tax rates faced by AFDC recipients in Minnesota (1986) are calculated. The paper reveals a methodology for calculating these rates. The results also show that low income families can face marginal tax rates well in excess of 100 percent.

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Marginal Tax Rates Faced by the AFDC Recipient

The Case of Minnesota

Ralph D. Husby

Critics of the welfare system in the United States are frequently heard to say something like the following:

> The welfare recipient in the United States faces marginal tax rates that approach confiscatory 100 percent levels.

Sometimes it is even said that combined marginal tax rates, for families eligible for benefits from several welfare programs, can on occasion exceed 100 percent. A marginal tax rate is defined as the extra tax liability that results from additional income. If earning another dollar means paying 30 cents more in income taxes, then the marginal tax rate is 30 percent. If a welfare recipient, upon earning one more dollar, pays 15 more cents in taxes and loses 25 cents in welfare benefits, then the combined marginal tax rate would be 40 percent. This problem is exacerbated by the fact that many welfare recipients are eligible for a number of programs, all having benefits which decline with income. It is the purpose of this paper to calculate more precisely the marginal tax rates faced by welfare recipients in different circumstances. The results indicate that this problem is even worse than many critics believe. Many welfare recipients pay well over a dollar in increased taxes and reduced benefits for every dollar they earn.

We will concentrate in this paper on the female headed household eligible for AFDC. The benefit calculation, and consequently the marginal tax rate, varies depending on whether the recipient has been on AFDC for less than four months, between four and twelve months, or more than twelve months. In this paper, the marginal tax rate, as it varies with income,

will be calculated for an AFDC recipient for those three different duration categories. As earnings increase, the recipient is "taxed" since AFDC, food stamps, and public housing benefits decrease, the earned income tax credit (EITC), currently a part of the tax code, varies, and the recipient may be liable for social security, state and federal income taxes. The calculations below are for a recipient residing in the state of Minnesota. The marginal tax rates for welfare recipients can vary between states because of differences in state income taxes and methods of calculating AFDC benefits, but the numbers below will be typical of a welfare recipient residing in one of the higher income, industrialized states.

Calculating combined Marginal Tax Rates for Family of Three on AFDC Less than 4 Months

Our prototype family

In this paper, the calculations will be based on a hypothetical family of three: a single female parent plus two children. Child day care expenses for this family are $100 a month. The absent father makes no contribution to the family income and his whereabouts are unknown to the mother. Her assets are limited to personal effects and an automobile with a market value of about $1,000. The marginal tax rates for this hypothetical family will be typical of welfare dependent families of other sizes and circumstances.

Calculating the AFDC and food stamp benefits (first 4 months)

We will begin with an explanation of how welfare benefits are calculated followed by a discussion of how they change when the recipient's earnings increase. From these changes, we can calculate a marginal tax rate.

The AFDC payment standard for a family of three in Minnesota in Spring 1986 (the guaranteed benefit for an unemployed recipient with no other income) was $528. Suppose that the head of our hypothetical family earns $300 a month. The AFDC benefit then is calculated as described in Table 1. From earnings plus EITC (the EITC is $33 if earnings are $300), one deducts $75 (the AFDC allowance for work related expenses), $100 (child care

expenses), $30, and one third of remaining earnings, the "30 and a third" being a work related "incentive." These deductions determine net earnings, $85 in this case, which are deducted from the payment standard to determine the monthly benefit ($443 in this case). Deducting one third of remaining earnings from gross earnings before subtracting from the payment standard means that one third of any additional earnings is not counted against you. The remaining two thirds of additional earnings, however, does reduce the AFDC benefit. Thus, the AFDC program by itself, for the recipient on AFDC for the first 4 months, includes an implicit marginal tax rate on earnings of 66 2/3 percent. The calculation of the food stamp benefit is summarized in Table 2. A standard deduction of $98, plus 18% of earned income, plus child day care expenses is subtracted from gross earnings to determine net food stamp income on which the food stamp coupon allotment is based. This hypothetical family with this income would be eligible for $75 worth of food stamps.

Calculating the public housing rent

We assume that our hypothetical family has secured public housing. [In reality, most communities have long waiting lists for public housing, so many potentially eligible families are not in public housing.] A person living in public housing pays either 30% of adjusted income or 10% of gross income, whichever is larger. Ordinarily, the former amount is the larger. The calulation for our hypothetical family is included in Table 3. Gross earnings, the earned income tax credit, and AFDC benefits are counted as income in determining public housing rent. The total of these three income items less child care expenses and a dependent deduction is multiplied by thirty percent in order to determine the contribution toward rent that this family must pay. The net income for public housing purposes turns out to be $596, for our hypothetical family, and 30% of this is $178.80. The public housing authority would round this up to $179.

Calculating the combined marginal tax rate

If our hypothetical recipient now receives a raise of $100 a month (or the opportunity of earning $400 elsewhere), how much better off will the family be? How will the benefits change?

The calculation of AFDC and food stamp benefits at earnings level of $400 is presented in Table 4. The AFDC benefit goes down by $74: Earnings plus EITC have increased by $111, and 2/3 of $111 is $74. Net earnings for food stamp purposes increases by $8 causing the food stamp allotment to decrease by an additional $2. Rent owed to the public housing authorities would increase by $11 to $190 (see Table 5) since net income for public housing purposes has increased by $37 ($37 x 0.3 = $11).

The determination of the combined marginal tax rate over the earnings range $300 to $400 is summarized in Table 6. Earnings plus EITC increase by $111, but AFDC and food stamp benefits decline by $76. The social security tax takes away another $7.15, and public housing rent would increase by $11. The recipient would only be ahead by $16.85 as a result of the earnings increase of $100. Thus, 83.15 percent of the increase was "taxed" away due to the implicit taxes related to AFDC, food stamps, and public housing plus the explicit social security tax. The fact that the EITC has increased (the implicit EITC tax over this income range is actually a <u>negative</u> marginal tax) mitigates the problem, but this will not be the case at higher income levels.

Income vs. marginal tax rate

The next step is to repeat these calculations for a number of earnings brackets. The resulting calculations are reported in Table 7. What is disturbing is that the marginal tax rates eventually exceeds 100 percent, reaching a maximum of 109.65 percent for earnings between $750 and $850. Combined tax rates increase for income levels over $500, first, because the recipient becomes liable for state and federal income taxes. [If there were no state income tax in Minnesota, then the maximum combined marginal tax rate for the case considered in Table 7 would be 105.15 percent rather than 109.65 percent.] The second reason

is that, although the marginal tax rate implicit to the EITC is a negative 11 percent up to an annual earnings level of $5000, it is zero percent for annual earnings between $5000 and $6500, and a positive 12 percent for gross annual earnings in excess of $6500 until the EITC is reduced to zero. In other words, the EITC increases by $11 for every $100 earned up to $5000, but decreases by $12 for every $100 earned above $6500 annually (or about $542 a month).

Calculating Marginal Tax Rates For Family of Three on AFDC More than 4 but less than 12 Months

Calculating the AFDC Benefit

The so-called "30 and a third" rule discussed above is supposed to serve as an incentive for employment and self-sufficiency. By subtracting one third of earnings in the determination of net (AFDC) earnings, that one third is not subtracted from the payment standard to determine the monthly benefit. As explained above, this thirty and a third rule leads to a 66 2/3 percent implicit tax on earnings.

After 4 months on AFDC, although the $30 continues to be subtracted, the one third is not. By not subtracting the one third, 100 percent of any additional earnings is counted against the recipient, meaning that there is a 100 percent nominal tax rate implicit to AFDC.

The effect that this change has on the calculation of the AFDC benefit can be seen in Table 8. The calculations here can be contrasted with those in Table 1. By not subtracting one third of the $128 remaining after the other deductions, the AFDC monthly benefit becomes $400 rather than $443. More important for our purposes, since all these remaining deductions are fixed (invariant with income), additional earnings cause the AFDC benefit to decrease by the same number of dollars. Earnings are indeed taxed at 100 percent.

Calculating the combined marginal tax rate

The result of this new treatment of earnings on the combined tax rate is shown in Table 9 (compare with Table 6). Both earnings and EITC are counted as income in calculating AFDC, so AFDC decreases by $111. However, only earnings and AFDC are counted as income in calculating the food stamp benefit, causing total gross income for food stamp purposes to fall by $11. Also, the 18% of earned income deduction causes adjusted income to fall by an additional $18 (since earnings increase by $100). These two factors cause the food stamp allotment to increase by $9. The combined marginal tax rate turns out to be a rather breath-taking 98.15%.

As income increases, the situation gets worse before getting better. The EITC levels off and then begins declining at the rate of $12 per $100 of earned income. Then there is the advent of state and local taxes. When the EITC levels off, the combined rate jumps from the vicinity of 99 to about 103 percent. For the income range $650 to $700, the effective marginal tax rate is a whopping 118.65%. The reasons for this high rate are a) the family is still eligible for AFDC up to (but not beyond) a $700 income, and B) it must also pay social security, state income and federal income taxes, the federal taxes beginning in the neighborhood of $650 in earnings. The combined rate then falls off abruptly (to 79%) above $700 in earnings because AFDC eligibility is lost. [During the first 4 months on AFDC, during which the family can deduct one third of earnings, AFDC eligibility extends to higher income levels.] Even at earnings levels between $850 to $917, the combined rate is a potentially very discouraging 86.85 percent. [At $917, the EITC has declined to zero.]

Calculating Combined Marginal Tax Rates for our Hypothetical Family of Three, on AFDC more than 12 Months

Calculating the AFDC benefit

After one is on AFDC for 12 months, then there is a third system for calculating the monthly grant. After 4 months, one loses the "third" in the "30 and a third" rule. After 12 months, one also loses the "30" in that rule. The effect on the calculation is very simple and

is described in Table 11. Instead of $205 in deductions (Table 8), there is $175 which drops the monthly grant by $30 from $400 to $370, given earnings of $300.

Calculating the combined marginal tax rate

The combined marginal tax rates are calculated in the same manner as above and presented in Table 12. They are nearly identical to those in Table 10 (which are relevant to those recipients on AFDC for 4 to 12 months). The combined marginal tax rate jumps to its apex of 116.48% at a monthly earnings level of $650 because federal income taxes begin at about this level. Then the rate drops to around 85% at earnings levels above $675 because AFDC eligibility, after 12 months, ceases at $674 of earnings for our hypothetical family.

Combined Marginal Tax Rates for AFDC Families with Different Circumstances

What about larger and smaller family sizes? Are the tax rates calculated above atypical for other types of AFDC eligible families? The answer is no. For larger or smaller family sizes, the earnings level at which the rate peaks, and the level at which AFDC benefits cease, will be higher or lower, but the rates themselves will be affected only trivially. The combined tax rates revealed in Tables 7, 10, and 12 correctly dramatize the financial disincentives faced by the low income family eligible for benefits from various social welfare programs.

There are, however, two or three reasons why some such families would face lower rates. First, many low income families, though technically eligible for public housing, are without it because of the acute shortage of public housing. Second, some states do not have a state income tax. During the first 4 months on AFDC, the presence or absence of public housing would make a difference. Since AFDC decreases by just $67 for every $100 increase in earnings (and EITC), the total of earnings, AFDC, and EITC goes up as earnings increase. For the earnings bracket, $750 to $850, the combination of rising earnings and declining AFDC and EITC would cause public housing rent to increase by 9% of earnings. If the

family was not eligible, the combined marginal tax rate would be 100.65 percent rather than 109.65 percent. If, in addition, there were no state income tax, then the rate for this income range would be 96.15 percent. In short, the absense of public housing from the menu of benefits for a low income family would lower the combined marginal tax rate during the first four months on AFDC. After 4 months, however, the effect of these two factors could be small. Take, for example, a mother and two children on AFDC for 4 to 12 months (refer to Table 10), earning between $650 and $700. As earnings increase by this $50 amount, the EITC decreases by $6 and AFDC by $44 (since there is, in effect, a 100% implicit tax connected with AFDC after 4 months). Since these three income sources -- earnings, EITC, and cash public assistance -- are used to calculate the public housing rent, and the net change in these three items is zero, there would be no increase in rent for the family on public housing (in this case). Whether one is or is not on public housing will not, therefore, affect this 118.65% figure. If there were no state income tax, however, this figure would be 116.15% instead of 118.65%. In short, after 4 months, the presence or absence of public housing benefits has virtually no effect on the combined rate.

Conclusion

The above material reveals that the existing U.S. welfare system contains a number of anomolies if self sufficiency is an issue. The above discussion, however, does not exhaust the anomolies. For example, AFDC recipients are automatically eligible for medicaid benefits. Typically, when a family loses eligibility for AFDC benefits, medicaid benefits cease or are substantially reduced. If, for example, a family were receiving $100 a month in medicaid benefits, earning one more dollar could mean that both AFDC and medicaid eligibility would cease. AFDC benefits would decline by $1 and medicaid by $100. The marginal tax rate related to this $1 of additional earnings would be 10,100 percent; the tax rate on additional dollars, then would immediately revert to the levels calculated in earlier sections of this

paper. This sudden loss of benefits far in excess of the causal earnings increment has come to be known as a "notch" in the literature on income maintenance.

It is the impression of this author, based on documents describing AFDC but not confirmable at this time, that some states treat child day care expenses in a way that creates another notch. If day care expenses are "reimbursed" rather than deducted as an expense, and if reimbursement ceases when the family goes off AFDC, then the earning of one more dollar could mean the loss of the last dollar of AFDC benefits plus all child care reimbursement and medicaid. In this case, there would be an obvious and substantial financial incentive to avoid reaching the earnings level that leads to a plunge in income and hence standard of living.

Considering the Reagan administration's consistent and prolonged emphasis on lowering marginal tax rates, particularly to the highest income groups, it is curious or ironic that this same administration has instituted "welfare reforms" that have raised marginal tax rates to the lowest income earners. This irony has been duly noted by others. In discussing the changes in tax and welfare policy in the early 1980s, Stephen Rousseas makes this statement.

> As John Kenneth Galbraith has felicitously put it, the poor won't work because they have too much money and the rich won't work because they have too little.[1]

The increase in this implicit AFDC tax rate, from 67 to 100 percent, for anyone on AFDC for more than 4 months, is a result of a 1981 reform. Between 1967 and 1981, the thirty and a third rule applied to all AFDC recipients, not just those on AFDC the first 4 months.

It seems to this author that a lowering of the marginal tax rate paid by low income welfare beneficiaries would be crucial to any welfare reform aimed at increasing the self-sufficiency of those on welfare.

1 Stephen Rousseas, The Political Economy of Reaganomics, M. E. Sharpe, Armonk, New York, 1982, p. 43.

Table 1.

The AFDC monthly benefit for a family of Three in Minnesota, Spring 1986, during first 4 months on AFDC, with $100 in monthly child day care expenses, and $300 in earnings.

AFDC payment standard			$528
Earnings		300	
Earned income tax credit (EITC)		33	
Earnings plus tax credits		333	
Deductions:			
Less $75*	$ 75		
Less child day care	100		
Less 30**	30		
		205	
		$128	
Less one third**		43	
			85
AFDC monthly benefit			$443

*AFDC deducts $75 from earnings as an approximation of work related expenses
**During first 4 months on AFDC, and addition, al $30 and a third is deducted an additional work incentive.

Table 2.

Calculation of the Food Stamp Benefit for our Hypothetical Family of Three

Gross earnings		$300
AFDC grant		443
TOTAL INCOME		743
LESS		
Standard deduction	98	
18% of earned income	54	
Dependent care	100	
Maximum allowable shelter deductions	39	
TOTAL DEDUCTIONS	291	291
NET INCOME		$452
Food Stamp allotment for family of three with $451 - $453 net income		$ 75

Table 3

Public Housing Rent Payable by
Hypothetical Family of Three

Gross earnings		$300
EITC		33
AFDC		443
TOTAL INCOME		$776
LESS		
Dependent deduction	$40 x 2 = 80	
Child care expense	100	180
		$596
RENT PAYABLE:	30% of $596 = $178.80	
	Rounded to $179	

Table 4

Calculating AFDC and Food Stamp Benefits for our
Hypothetical Family of Three, Earnings equal to $400.

AFDC payment Standard			$528
Earnings		$400	
EITC		44	
TOTAL		444	
LESS			
$75	$ 75		
Child day care	100		
$30	30		
		205	
		239	
less one third, 79 2/3, rounded to		80	
		159	159
AFDC monthly benefit			$369
Gross earnings			400
AFDC grant			369
TOTAL			769
LESS: Standard deduction		98	
18% of earned income		72	
Dependent care		100	
Shelter deduction		39	309
NET INCOME			$460
Food Stamp allotment			$ 73

Table 5

Calculation of Rent Payable for Public Housing
When Earnings increase to $400

Gross earnings		$400
EITC		44
AFDC		369
TOTAL INCOME		$813
LESS		
Dependent deduction, $40 x 2 =	80	
Child care expense	100	180
		$633

Rent Payable: 30% of $633 = $189.90

rounded to $190

Table 6

The Determination of the Combined Marginal
Tax Rate for our Hypothetical Family of
Three, Earnings Rising from $300 to $400 Monthly.

When earnings rise from $300 to $400,
Then income changes

Due to	by
Earnings	+$100
EITC	+ 11
AFDC	- 74
Food Stamps	- 2
Social security tax (7.15%)	- 7.15
Public housing	- 11
State income tax	0
Federal income tax	0
NET CHANGE	+$16.85

Combined marginal tax rate 83.15%

Table 7

Combined Marginal Tax Rates Resulting from EITC, AFDC, Food Stamps, Public Housing, the Social Security Tax, and State and Federal Income Taxes, for Hypothetical Family during first 4 Months on AFDC

Earnings Bracket	Marginal tax rate
$300 to $400	83.15
400 to 425	85.96
425 to 525	89.15
525 to 550	88.56
550 to 650	94.15
650 to 750	107.65
750 to 850	109.65
850 to 950	108.65

Table 8

Calculation of the AFDC Benefit for our Hypothetical Family of Three with $300 in Monthly Earnings, Having Been on Welfare over 4 but less than 12 Months.

AFDC payment Standard			$528
Earnings		$300	
EITC		33	
TOTAL		333	
LESS			
Allowance for work expenses...	$ 75		
Child care	100		
$30	30		
TOTAL DEDUCTIONS		205	
			129
AFDC monthly grant			$400

Table 9

The Determination of the Combined Marginal Tax Rate for our Hypothetical Family of Three, on AFDC for more than 4 but less than 12 Months, As Earnings Rise from $300 to $400.

When earnings rise from $300 to $400, then income changes

Due to	by
Earnings	+$100
EITC	+ 11
AFDC	- 111
Food stamps	+ 9
Public housing	0
Social security tax	- 7.15
State income tax	0
Federal income tax	0
	+ 1.85

Combined marginal tax rate 98.15%

Table 10

Combined Marginal Tax Rates for our Hypothetical Family of Three, on AFDC for more than 4 but less than 12 Months, for Selected Income Brackets

Income Bracket	Marginal Tax Rate
$300 to $400	98.15%
400 to 425	99.15
425 to 525	102.15
525 to 550	103.15
550 to 650	107.15
650 to 700	118.65
700 to 750	79.05
750 to 850	86.55
850 to 917	86.85

Table 11

Calculating the AFDC Benefit for our
Hypothetical Family of Four, on
AFDC for more than 12 Months, with Earnings of $300.

AFDC payment standard.			$528
Earnings		$300	
EITC		33	
TOTAL		333	
LESS			
Allowance for work expenses	75		
Child care	100		
TOTAL DEDUCTIONS		175	
Net income			158
AFDC monthly grant			$370

Table 12

Combined Marginal Tax Rates for our
Hypothetical Family of Three, for
Selected Earnings Brackets, on
AFDC for More than 12 Months

Earnings Bracket	Marginal Tax Rate
$300 - $400	98.15%
400 - 425	99.85
425 - 525	102.15
550 - 650	107.15
650 - 674	116.48
750 - 850	85.55
850 - 917	86.86

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